Assessing Agroforestry Uptake in England

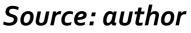
Emma Eberhardt, MSc Agroforestry and Food Security mmb2ojzf@bangor.ac.uk

Supervisors: Tim Pagella (Bangor University) & Colin Tosh (Organic Research Centre)

Overview

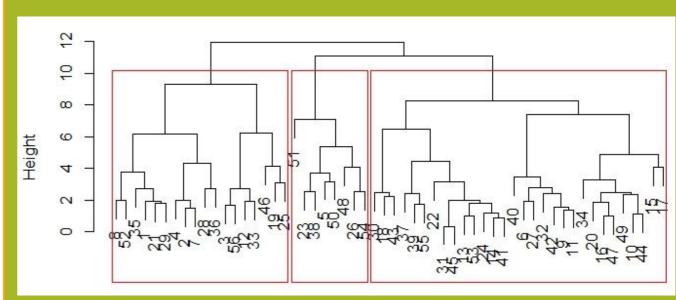
- The Organic Research Centre are leading the Agroforestry ELM Research Pilot for Defra in collaboration with the Woodland Trust, Abacus Agriculture and the Soil Association
- There is a lack of agroforestry data and monitoring in the UK(1)
- More information is needed on who is doing agroforestry (2)
- This research project seeks to address this knowledge gap by testing for patterns between types of farms and engagement with agroforestry to determine where policy should be targeted to provide effective support to increase agroforestry cover





Methods

- 56 livestock, arable and horticulture farmers were interviewed in England
- A typology of farmers was constructed using Principle Component Analysis and Clustering Analysis (3)
- Variables measured included farmer age, gender, experience, • tenancy, value as well as farm size, sector and diversity
- Farmer typology was then tested against interest and • engagement in agroforestry and compared
- Variables measured included agroforestry interest, • management, perception, understanding and barriers





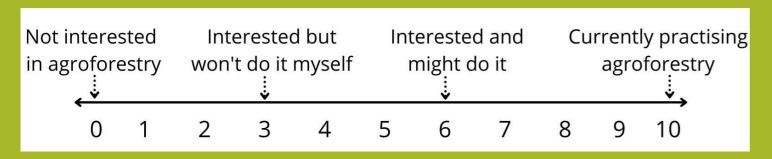


Fig 2: Agroforestry interest scale

Policy, 103, p.105328.

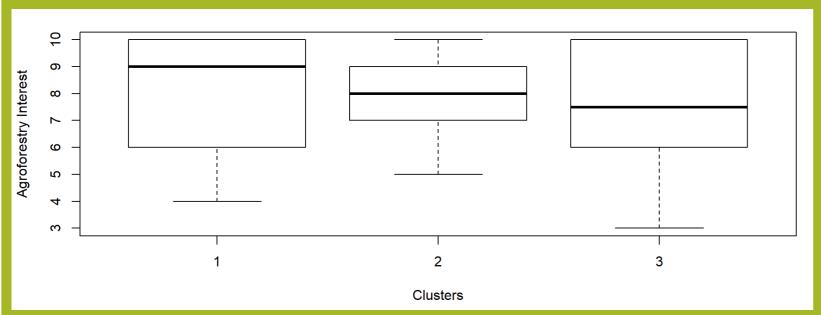


Fig 3: Boxplot of farmer typologies against agroforestry interest

Initial results

- 3 typology of farmers
- Gender, age, experience and tenancy main variables differencing groups
- High levels of agroforestry engagement is correlated with young (45) female farmers with long-term tenancies

Limitations

- Little engagement with farmers not interested in agroforestry due to limited resources and capacity
- Most participants were not new entrants and had secure tenancy
- Sampling bias towards organic and regenerative farmers

Preliminary conclusions

- Farmer typology is linked to agroforestry uptake and should be taken into account when developing policies
- More extensive research of this nature is required



References

(1) Den Herder, M., Moreno, G., Mosquera-Losada, R.M., Palma, J.H., Sidiropoulou, A., Freijanes, J.J.S., Crous-Duran, J., Paulo, J.A., Tomé, M., Pantera, A. and Papanastasis, V.P., 2017. Current extent and stratification of agroforestry in the European Union. Agriculture, Ecosystems & Environment, 241, pp.121-132. (2) Smith, J., Pearce, B.D. and Wolfe, M.S., 2012. A European perspective for developing modern multifunctional agroforestry systems for sustainable intensification. Renewable Agriculture and Food Systems, 27(4), pp.323-332. (3) Graskemper, V., Yu, X. and Feil, J.H., 2021. Farmer typology and implications for policy design-An unsupervised machine learning approach. Land Use

